

## Reduplication in the Bantik Language

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This study aims to delineate the morphology of reduplication in Bantik, a Western Malayo-Polynesian language spoken in North Sulawesi, Indonesia. Two main types of reduplication occur in Bantik: reduplication of the first consonant of the base and that of the first two syllables of the base. These types of reduplication appear most frequently and are most productive in three main word classes: nouns, verbs, and adjectives.

**Keywords:** reduplication, Sangiric languages, iterative aspect, pluractionality, excessiveness

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### 1. The Bantik language

The Bantik language belongs to the Sangiric micro-group (cf. Sneddon, 1993), which is categorized as a Philippine language subgroup of the Western Malayo Polynesian group (cf. Noorduyn 1991 ; Sneddon 1984 ; among others). It is spoken by around 10,000 people in nine villages in the vicinity of Manado, a provincial city of the North Sulawesi, and in two other villages approximately 100 km away from Manado (Noorduyn, 1991). Each speaker of Bantik also speaks Manado Malay, a dialect of Indonesian. Residents of these villages born after 1970 mostly use Manado Malay, and those born after 1980 do not use Bantik at all. Thus, it is clear that the language is in critical danger of extinction. Bawole (1993) and Utsumi (2005) have conducted extensive studies on this language.

Bantik consists of five vowels /i, e, a, o, u/ and fourteen consonants /p, b, t, d, k, g, s, h, ʔ, m, n, ŋ, r, j/. It has a phonemic pitch accent<sup>1</sup>. The syllable structure is (C)(C) V (C), where only nasals and glottal stops are allowed as codas. The Bantik language has word bases to which various affixes are attached. Most of the syllables are composed of one

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<sup>1</sup> For example, *pa'higi* “well” and *pahi'gi* “knife” make a minimal pair. (The pitch accent nucleus is indicated by an apostrophe at the beginning of the syllable.)

of the following structures: CVC, CV, VC, or V. Few exceptional bases begin with a consonant cluster and have the syllable structure of CCVC. Consonant clusters in these cases consist of a nasal (one of /m, n, ŋ/) and a homo-organic stop (one of /p, b, t, d, k, g/), or a nasal and an alveolar fricative (/s/)<sup>2</sup>. A glottal stop occurs only at the end of a base, except in *kiʔaŋ* “to lift” and *eʔe* “there (distal).” The vowel sequence is regarded as two separate syllables. For example, *sakei* has three syllables, /sa.ke.i/.

As is the case with many other Philippine languages, Bantik has a rich morphology that is relatively transparent (cf. Himmelmann, 2005 among others). A base may take various affixes to form a word. Nouns are base-only or derivational, in which one or two affixes are attached. Base-only adjectives are often found, but in most cases, adjectival bases take the prefix *ma-* to form an adjective. Moreover, there are some derivational affixes that form adjectives from verb bases or noun bases. Verbal bases take one or more affixes in order to appear in a sentence, with a few exceptions<sup>3</sup>. Adjectives and verbs are distinguished from each other in that verbs have past and non-past tense oppositions while adjectives do not.

There are three grammatical voices in Bantik: Actor Voice, Goal Voice, and Conveyance Voice. The latter two are Undergoer Voices. Verbs in Actor Voice take one of the following affixes: the infix *-um-/im-*, the prefix *ma-/na-*, or the prefix *maN-/naN-*. For Actor Voice, the non-past tense is indicated by the presence of *-um-*, *ma-*, and *maN-*, while the past tense is indicated by the affixes *-im-*, *na-*, *naN-*. The Undergoer Voice does not take any affixes to indicate the non-past tense, but takes the prefix *ni-* to indicate the past tense. The capital *N* in *maN-* and *naN-* shows that the first consonant of the base undergoes nasalization, in which either a homo-organic nasal is inserted or the first consonant of the base changes into a homo-organic nasal. All of these affixes are henceforth referred to as “voice-indicating affixes,” since their function is to denote the voice of a specific verb.

Although the basic word order in Bantik is SVO, a VOS word order occurs frequently, particularly when the verb is in Undergoer Voice. The grammatical relation is expressed by not only word order but also noun-marking devices, which will be referred to as “noun markers” in the following discussion<sup>4</sup>.

<sup>2</sup> For example, *ŋkedeʔ* “to stop” and *nsao* “over there” (more or less the same height).

<sup>3</sup> Some imperatives do not take affixes. Moreover, as will be discussed below, there are a few Undergoer Voice non-past verbs that do not have affixes.

<sup>4</sup> They appear before the nominals and can thus be categorized as prefixes, but are referred to as “noun markers” in this study in order to clarify their functions. The noun markers are *i-/Ø*, *si-/su-/Ø*, and *ni-/nu-/Ø*. The noun marker *i-/Ø* is attached to the subject, while *si-/su-/Ø* is attached to statements that indicate goal or location among other things. *Ni-/nu-/Ø* is attached to NPs denoting the instrument used in an action, the conveyed theme or the object of an action in Actor Voice sentences and the actor in Undergoer Voice. Noun markers also show human/non-human and singularity/plurality distinctions. The markers written on the left, i.e. *i-*, *si-*, *ni-* are attached to nominals indicating human singular. The rest are attached to nominals indicating human plural and non-human nouns. Zero markers may appear when an NP denotes a non-human subject or object.

## 2. Morphology of reduplication in Bantik

Reduplication is an important process of word formation in Bantik and other Sangiric languages. Reduplication in Bantik is defined as “a word-formation device that repeats a part or all of the bases.” There are two types of partial reduplication in Bantik that are most important for the enrichment of the Bantik vocabulary and in the paradigm of verbs and adjectives. They are very productive and are found in various word classes such as verbs, adjectives<sup>5</sup>, and nouns. In adverbs, although there are a few lexical reduplications that do not have a non-reduplicated form, they are much less common. One of the examples is the adverb *gare-gare?* “only,” in which the first two syllables are reduplicated (the final glottal stop is not reduplicated in Bantik). There is also full reduplication, but this is limited to nouns and is productive only to a certain extent. In this study, we will primarily focus on partial reduplications, with a brief examination of full reduplication. The possible reduplication patterns are shown below.

### I) Full reduplication

This type of reduplication is found only in nouns, and its function is to denote plurality. A base is fully reduplicated if we ignore the base-final glottal stop, which is the only phoneme that is not reduplicated. In most of the bases, a glottal stop is believed to have been added in later innovations<sup>6</sup> and therefore is not stable. For example, *ana-ana?* “children” and *manu-manu?* “birds” or “chickens.” Full reduplication retains a nasal as a coda in the last syllable of the base, such as in *sahan-sahan* “ants.” Other examples of full reduplication include tri-syllabled bases such as in *pahigi-pahigi* “knives” and *metehe-metehe?* “teachers.” The base-final glottal stop is not reduplicated in any pattern, that is, neither in full reduplication nor in partial reduplication.

### II) Partial reduplication

Partial reduplication is more frequent and productive than full reduplication. It has various functions and is found in verbs and adjectives. Partial reduplication can stand alone, but in many cases, partially reduplicated bases are accompanied by affixes, such as voice-indicating affixes (e.g., the prefix *ma-/na-* or the suffix *-AN*) for verbs and the prefixes *ma-* and *na-* for adjectives. There are two types of partial reduplications in Bantik.

<sup>5</sup> Verbs and adjectives in Bantik are distinguished by the following two factors. Adjectives do not have tense opposition, while verbs do. Moreover, the paradigms of the two word classes are significantly different.

<sup>6</sup> A base-final glottal stop seems to have occurred after an echo vowel, identical with the one in the preceding syllable in innovations. Some examples are *\*uRas* → *uhasa?* “wash” and *\*səkol* → *sokolo?* “cough” (Sneddon 1984). The Bantik language avoids closed word-final syllables, and often adds a vowel. Sneddon (1993) assumed that it is an areal feature of Sulawesi languages. A glottal stop sometimes accompanies the added vowel. However, the condition that requires the addition of a glottal stop has not been discovered. In other cases, a base-final glottal stop comes from base-final stops, such as /p, t, k/, as in *\*anak* → *ana?*

- A) The first type of partial reduplication is the repetition of the first consonant of the base, followed by the vowel /a/. This is formulated as “C1 + /a/ + base.” Some bases have /a/ in the nucleus of the first syllable, such as in *ma-p-a-pahada?* “salty (for plural entities)” from *pahada?* (the base of *ma-pahada?* “salty”). In such cases, it seems that the first syllable of the base is reduplicated. However, if we take a look at other bases such as in *ma-t-a-tiŋkope?* “blunt (for plural entities)” from *tiŋkope?* (the base of *ma-tiŋkope?* “blunt”), it is clear that the vowel inserted after the first consonant is not copied from the base. Hereafter we will refer to this form of reduplication as Type A.
- B) The second type of partial reduplication is the repetition of the first syllable and the onset and nucleus of the second syllable, such as in *ma-sepo-sepo?* “tight (for plural entities)” from *sepo?* (the base of *ma-sepo?* “tight”). This is formulated as “σ1 + (C2)V2 + base” in the following description. The coda of the second syllable, if any, is not reduplicated, such as in *ma-kia-kiaŋ* “to lift repeatedly” from *ma-kiaŋ* “to lift”. When a base is disyllabic and ends with a vowel, such as *buhu-buhu* “newer” from *buhu* “new,” it appears as if the base has been fully reduplicated. However, if we take a closer look at other bases such as *baga-bagai* “bigger” from *bagai* “big,” it is evident that the reduplication is partial. Hereafter we will refer to this form of reduplication as Type B.

The difference between Type A full reduplication and Type B partial reduplication is not clear when we look at disyllabic bases that end with a glottal stop, such as in *ma-sepo-sepo?* “tight (for plural entities),” or those with an open final-syllable, such as in *buhu-buhu* “newer.” However, it becomes clear in the following two cases. First, when a disyllabic nasal ends with a nasal, that nasal is reduplicated in full reduplication but not in Type B reduplication. Second, when tri-syllabled bases are reduplicated, the whole base (except for a base-final glottal stop) is reduplicated in full reduplication, but the last syllable is not reduplicated in Type B reduplication.

### III) Reduplication and other affixes

Nouns and adverbs in Bantik typically appear without affixes. On the other hand, many adjective bases need the prefix *ma-* to function in a sentence, and verbs usually need affixes to appear in a sentence. When reduplication is applied to adjectives and verb bases with affixes, it is usually applied to the base. For example, the reduplication of *s-um-oha* “to run,” whose base is “*soha*,” takes the infix *-um-*, and the reduplicated form *s-um-a-soha* “to run (for plural subjects)” is the result of Type A reduplication. The infix is inserted after the reduplicated first consonant of the base, followed by /a/

and the base itself. The same is true with Type B reduplication. The reduplicated form of *s-um-oha* is *s-um-oha-soha*. The infix is inserted after the first consonant that is a part of the reduplicated form.

If a verb with a prefix is reduplicated, voice-indicating prefixes (see Section 1 for explanation) are not affected. An example of this is *ma-m-a-muahi* “to dry (for plural subject; Type A reduplication)” and *ma-mua-muahi* “to dry repeatedly (Type B reduplication).” Both are formed from the verb *ma-muahi* “to dry.”

However, when derivational affixes are attached, they are regarded as a part of the base and reduplicated as well. For example, the reduplicated forms of *ma-ka-regei* “can laugh” are *ma-k-a-k-aregei* (plural subject; Type A) and *ma-kare-karegei* (Type B). The prefix *ma-*, a voice-indicating prefix, does not get reduplicated, but the derivational prefix *ka-* is reduplicated as it is regarded as a part of the base.

### 3. Functions of reduplication

There are four main functions of reduplication. They will be described briefly in this section, and various examples and sample sentences will be offered in Section 4.

#### 3.1. Plurality

Plurality is predominantly expressed by full or partial reduplication<sup>7</sup>. The former is used for noun bases and the latter for adjectives and verbs. Plurality is not obligatorily expressed in nouns. On the other hand, adjectives should take the plural form (Type A partial reduplication) when nouns that are modified by them are plural. (See Section 4.3.1)

##### 1) Nouns

The only purpose of full reduplication with nouns is to denote plurality.

##### 2) Adjectives

Partial reduplication can also express plurality if it applies to adjectives. Type A reduplication found in the inflectional paradigm of adjectives expresses plurality of the entities denoted by a noun that has been modified by the reduplicated form. Some adjectives in Bantik can function as adjectives without any affix, but others need the prefix *ma-*. The latter require the prefix even when reduplication takes place. Examples include *ba-bagai* “big (for plural entities)” from *bagai* “big” and *ma-na-nai?* “long (for plural entities)” from *ma-nai?* “long”.

<sup>7</sup> There is another way to indicate plurality. The particle *maya*, when placed before a noun, indicates that the noun denotes more than one object.

### 3) Verbs

When partial reduplication is applied to verb bases, it serves two similar functions. When Type A reduplication is applied to a verb, it expresses that the subject of the verb is plural. When Type B reduplication is applied to a verb, it expresses the “iterative aspect,” which indicates the plurality of an action. Both Type A and Type B reduplications found with verbs are productive and are parts of the inflectional paradigm.

### 3.2. Comparison and excessiveness

Excessiveness of the meaning expressed by an adjective is expressed by partial reduplication. When Type B reduplication takes the prefix *ma-*, it expresses comparative degree, as in *ma-raŋka-raŋkasa?* “taller” from the base *raŋkasa?* “tall.” When it takes the prefix *na-*, it denotes unfavorable excessiveness as in *na-raŋka-raŋkasa?* “too tall” from the base *raŋkasa?*. This Type B reduplication found with adjectives is productive and is also a part of the inflectional paradigm of adjectives.

### 3.3. Soleness

When Type B reduplication is applied to pronouns, the form denotes that “only the person who is denoted by the pronoun” does something. Type A reduplication is not applied to pronouns.

### 3.4. Derivation

#### 3.4.1. Nominalization

When partial Type A reduplication is applied to verb bases, nominalization occurs. Nominalization refers to various types of derivation from verbal or adjectival bases resulting in the formation of nouns. The reduplicated nouns derived from verb bases denote the “instrument used in an action,” the “type of action,” or the “place where the action occurs.”

When partial Type A reduplication is applied to a verb base without any affix, it can have several meanings depending on the verb bases. First, it expresses the instrument used for the action denoted by the verb base. An example is *s-a-sihun* “scoop” from the verb base *sihun* “to scoop.” In addition, it can denote the “manner of action,” as in *r-a-rampaŋ* “manner of running” from *rampaŋ* “to run.” Some verb bases need the prefix *ka-* to denote “manner of action” as in *ka-k-a-kaha?* “manner of crying” from *kaha?* “to cry,” or the prefixes *pa-/paN-*<sup>8</sup> as in *pa-n-a-niŋan* “manner of carrying” from *diŋan* “to carry.” When the reduplicated form takes the suffix *-AN*, or the combination of the

<sup>8</sup> The capital N in *paN-* indicates that the first consonant of the base undergoes nasalization, as in *maN-* and *naN-*. A homo-organic nasal is inserted or the first consonant is substituted with a homo-organic nasal.

prefixes *pa-/paN-* and a suffix, it indicates where the action denoted by the verb takes place, such as *pa-k-a-kabiŋ-an* “wedding ceremony hall” from *kabiŋ* “to marry.” These reduplicated forms are the result of derivational processes; hence, not all verb bases can take the above forms.

### 3.4.2. Derivational adjectives

One type of adjective is derived from verb bases using Type A reduplication with the prefixes *ma-* and *ka-*. This form expresses “characteristics/tendency for provoking the state or action denoted by the verb base.” For example, *ma-ka-s-a-sibi?* “lovable” is derived from *sibi?* “to like.” Without the prefix *ka-*, the reduplicated form can indicate “occupational or habitual tendency” such as *ma-n-a-nekoso?* “frequently stealing (characteristics of a person)” from *ma-nekoso?* “to steal.”

### 3.5. Summary of functions of reduplication in Bantik

To summarize, the functions of reduplication in Bantik can be categorized into three types: “larger degree,” “singularity,” and “derivation.”

The “larger degree” function groups together the four meanings mentioned above; “plurality,” “characteristics/action of plural actor,” the “iterative aspect (in which the action is repeated more than once),” and “larger degree.” This function is motivated by iconicity, as suggested in Regier (1998) and Conradie (2001) among others. That is, the more the form is repeated, the larger the quantity it denotes. In other languages, reduplication often creates forms that indicate smaller quantities or lesser degrees<sup>9</sup>. However, in Bantik, iconicity is the process at work.

The second function, “singularity,” seems to be a distinct function. This seems to be due to the “emphasizing” function also created by repeating a certain form.

The third function, “derivation,” differs starkly from the other two functions, and it is one of the word-forming devices widely applied to Bantik bases. This group includes nominalization and derivational adjectives. The correlation between the reduplication forms, word classes, and functions are shown in Table 1. NA in Table 1 is an abbreviation for “not applicable”.

<sup>9</sup> Swahili (Ashton 1952) and Palauan (Joseph 1943) offer examples for decrease in quantity or degree.

**Table 1: Reduplication forms and their functions**

	Noun Bases	Pronoun	Adjective Bases	Verb Bases
Full reduplication	Plurality	NA	NA	NA
Partial red, Type A “C1+/a/+Base”	NA	NA	Plural THEME <sup>10</sup>	Plural ACTOR Derivation of adjectives Derivation of nouns (instrument, manner of action, location)
Partial red, Type B “σ1C2V2+Base”	NA	Soleness	Comparative degree Excessive degree	Iterative aspect

#### 4. Examples of reduplication in Bantik

In this section, we will be looking at actual examples of reduplicated words and sample sentences in which the reduplicated forms are used. Verbs in Bantik are classified into three categories, depending on the affix they take when they appear in a sentence, as noted in Section 1. The morphology of reduplication differs depending on the group to which the verb base belongs. The morphology of each verb group will also be discussed later in this section.

##### 4.1. Full reduplication

Only nouns can take full reduplication in Bantik, as stated in Section 2. Examples of full reduplication in Bantik are provided in Table 2. Note that nouns in Bantik do not necessarily get reduplicated when they denote plural entities. It is optional to use a reduplicated noun for plural objects.

<sup>10</sup> The term “THEME” is used here as a semantic role that indicates the subject of adjectives and stative verbs.



**Table 2: Plurality expressed by reduplicated noun bases**

Base	Meaning	Reduplicated form	Meaning
<i>buk</i> (loan word from Indonesian)	book	<i>buk-buk</i>	Books
<i>Duhi</i>	bone	<i>duhi-duhi</i>	Bones
<i>raku?</i>	a piece of cloth	<i>raku-raku?</i>	pieces of clothes
<i>tiŋkodo?</i>	heel	<i>tiŋkodo-tiŋkodo?</i>	heels
<i>Sakaen</i>	boat	<i>sakaen-sakaen</i>	boats

Below are examples where fully reduplicated nouns are used in a sentence.

- (1) *manu-manu? koto? ŋ-kayu t-im-ara?=te*  
 RED-bird summit NU-tree IM-fly = COMP  
 “Many birds had flown.”

- (2) *ana-ana? sikora? s-im-u? su-gaheda*  
 RED-child school IM-enter SU-church  
 “Schoolchildren entered the church.”

Full reduplications appear in texts very infrequently. The most commonly used base is *ana-ana?* (children).

#### 4.2. Partially reduplicated pronouns

Pronouns, when partially reduplicated, take Type B form, thus indicating that the person(s) denoted is/are the only entity who does/do/did the action. Examples are shown below. As shown in example 5, the reduplicated form might be placed at the end of a sentence, in addition to the subject pronoun, in order to emphasize that only the person denoted by the pronoun performs the action.

- (3) *isi-isie ma-hiŋa? kinasa?*  
 RED-I.3sg MA-cook fish  
 “S/he will cook the fish her/himself.”

- (4) *kite-kite? mam-bere su-saŋkoi*  
 RED-I.1pl.INC MAN-work SU-field  
 “We are the ones who work in the field”

- (5) *ikau ma-ŋinsuei berenan e?e ika-ikau*  
 I.2sg MAN-finish work that RED-I.2sg

“You will finish work only by yourself”

### 4.3. Partially reduplicated adjectives

#### 4.3.1. Adjectives for plural entities

When an adjective denotes a property or a state of plural entities, it almost always needs to use the partially reduplicated Type A formation. Consider the following examples. When it is clear from the context that the objects described by the adjective are plural, it must take a partially reduplicated form, as shown in example 8a. Sentence “b” with the non-reduplicated form is not accepted.

- (6) *pahigi ni-pasko ma-t-a-tinjkope?*  
 knife NI-Vasco MA-RED-/a/-blunt  
 “All the Vasco’s knives are blunt.”

- (7) *dijan nai? manu? b-a-bagai*  
 bring come chicken RED-/a/-big  
 “Bring all the big chickens.”

- (8)a. *side nam-bere pai sene ma-η-a-ηenei=te* *ha*  
 I.3pl NAN-work exit there MA-RED-/a/-be.tired=COMP all  
 “All of them who worked there were tired.”  
 b. \**side nam-bere pai sene ma-ηenei=te* *ha*  
 I-3pl NAN-work exit there MA-be.tired=COMP all

When it is clear from the context that the adjective modifies plural entities, the reduplicated form is required, even when the modified noun (“evenings” in the case of example 9a and b below) does not appear as in example 9b.

- (9)a. *huntia nu-babarou gare?=te ma-d-a-darindiη*  
 every NU-evening only=TE MA-RED-/a/-cold  
 “It is cold every evening”  
 b. *gare?=te ma-d-a-darindiη*  
 only=TE MA-RED-/a/-cold  
 “It is cold (every evening)”

The only exception to the requirement of a reduplicated form occurs when the modified noun itself is reduplicated to overtly show the plurality of the entities, as shown in example 10. Example 10a has a reduplicated adjective form in addition to the

reduplicated noun; it is ungrammatical. Example 10b is acceptable since only the noun is reduplicated.

- (10)a. \**manu-manu?*    *sene*    *ba-bagai*  
           RED-bird    there    RED-big  
           Intended meaning: “Birds there are big.”
- b.    *manu-manu?*    *sene*    *bagai*  
           RED-bird    there    big  
           “Birds there are big.”

#### 4.3.2. Partially reduplicated adjectives expressing comparative degree

When Type B partial reduplication is applied to the adjective bases, they express comparative degree. As mentioned in section 2, some adjective bases can be used as an independent word without any affix, while some can be used only after the attachment of the prefix *ma-*. Examples 11 and 12 show the former type of bases. In comparative sentences, the object that is the standard of comparison is placed after *bo* (also used as a coordinate conjunction).

- (11)    *tiro?*=*ne*        *baga-bagai*    *tumani*    *bo*    *tiro?*=*ku*  
           foot=NI-1sg    RED-big        very        BO    foot=NI.1sg  
           “His feet are much bigger than mine.”
- (12)    *daren*    *ene*    *dara-darai?*    *bo*    *daren*    *su-sie*  
           road    that    RED-bad        BO    road    SU-here  
           “That road is worse than the road here.”

The following examples 13 and 14 are sentences with the latter type of bases, which need the prefix *ma-* when they appear in a sentence. The prefix *ma-* is still attached in a partially reduplicated form. This form can also modify the manner of action, as in example 14.

- (13)    *barei*    *ni-pasko*    *ma-raga-ragada?*    *tumani*    *bo*    *barei*    *ni-renku*  
           house    NI-Vasco    MA-RED-expensive    very        BO    house    NI-Rengku  
           “Vasco’s house is much more expensive than Rengku’s house.”
- (14)    *i-hili*    *ma-sahi-sahioko?*    *man-dahun*    *bo*    *i-tuadi?*=*ne*  
           I-Hilly    MA-RED-fast        MAN-sew        BO    I-younger.sibling=NI.3sg  
           “Hilly is faster at sewing than her younger sister/brother.”

#### 4.3.3. Partially reduplicated adjectives expressing excessive degrees

Partial reduplication of Type B along with the prefix *na-* denotes an excessive degree. The excessiveness observed usually has negative connotations. The examples using this form are shown below.

- (15) *ia?*      *na-hiŋa?*      *kan*      *na-ŋasa-ŋasa=te*  
 I.1sg    NA-cook    rice    NA-RED-many=COMP  
 “I cooked too much rice.”

- (16) *isie*      *aya*      *ma-kapa-make*      *salana*      *ene*      *ka*      *na-sepo-sepo?*  
 I.3sg    not    MA-KAPA-wear    trousers    that    because    NA-RED-narrow  
 “S/He cannot wear those trousers because they are too tight.”

- (17) *daren*      *ene*      *na-dara-darai?*=*te*      *nu-roda*  
 road      that      NA-RED-bad=COMP      NU-cart  
 “That road got worse because of the cart.”

#### 4.4. Nominalization: Derivation with bases

Verb bases take the two partially reduplicated forms to denote various meanings. Type A reduplication plays a crucial role in forming nouns from verb bases. As mentioned in Section 3.3, “instrument,” “manner of action,” and “place (where the action takes place)” are expressed by this type of reduplication. When the resulting meaning is “manner of action,” the reduplicated form may need the prefixes *ka-* or *pa/paN-* depending on the verb base. If the reduplicated form denotes “place,” it needs a combination of the prefix *pa/paN-* and the suffix *-AN*.

##### 4.4.1. Noun formation expressing “instrument”

When a verb is partially reduplicated by the Type A form, a noun is formed. It indicates an instrument used in an action as denoted by the source verb base. This form is also used to indicate entities closely related to the action denoted by the verb base. As shown in Table 3, the first five nouns are easily regarded as “instruments.” The latter four are nouns that indicate entities closely related to verb bases. *Kodo?* “eyelashes” and *s-a-sinda?* “lung (can also mean ‘breath’)” are human body parts used in the actions “to blink” and “to breathe”; *s-a-suan* “plant” and *b-a-baehe?* “present, payment” indicate entities that are needed when conveying the actions “to plant” and “to give merit.”

**Table 3: Nominalization: Reduplicated verb bases expressing “Instrument”**

Base	Verb form	Meaning	Reduplicated form	Meaning
<i>turubu?</i>	<i>ma-nurubu?</i>	to cover, close	<i>t-a-turubu?</i>	blanket, cover
<i>Dahuŋ</i>	<i>man-dahuŋ</i>	to sew	<i>d-a-dahuŋ</i>	needle
<i>supu?</i>	<i>ma-nupu?</i>	to blow darts	<i>s-a-supu?</i>	blowing darts/pipe
<i>Sahuŋ</i>	<i>ma-nahuŋ</i>	to carry water	<i>s-a-sahuŋ</i>	bucket, pail
<i>susu?</i>	<i>ma-nusu?</i>	to stick, thrust	<i>s-a-susu?</i>	skewer, broach
<i>kodo?</i>	<i>k-um-odo?</i>	to blink	<i>k-a-kodo?</i>	eyelashes
<i>sinda?</i>	<i>s-um-inda?</i>	to breathe	<i>s-a-sinda?</i>	breath, lung
<i>Suan</i>	<i>ma-suan</i>	to plant	<i>s-a-suan</i>	plant
<i>baehe?</i>	<i>ma-maehe?</i>	to pay	<i>b-a-baehe?</i>	present, payment

Here are some examples the use nominalized verb bases.

- (18) *ia?*      *na-ka-pasa?*      *s-a-sahuŋ*                      *bagai*    *bo*      *ma-henden*  
 I.1sg    NA-KA-break    RED-/a/-carry.water    big      BO      MA-red  
 “I accidentally broke a big red bucket”

- (19) *s-a-sinda?*                      *ni-reŋku*              *aya*      *ma-pia*  
 RED-/a/-breathe      NI-Rengku      not      MA-good  
 “Rengku’s breath is not good (i.e., It is known that Rengku is not well, which is indicated by his breath)”

#### 4.4.2. Nominalized form expressing “manner of action”

Partial Type A reduplication also forms nouns indicating “manner of action.” Bantik verbs are divided into three categories according to the affix they take in Active Voice. The first group takes the infix *-um-/-im-*. The infix *-um-* appears when the verb is in non-past tense, while *-im-* is used when it is in past tense. These verbs are predominantly dynamic verbs that are double-voiced, that is, they take two grammatical voices: Actor Voice (with an ACTOR as subject) and Goal Voice (with GOAL or LOCATION as subject). Verbs belonging to this group only need reduplication to form nouns that indicate “manner of action,” as shown in Table 4.

**Table 4: Nominalization: Reduplicated verb bases expressing “Manner of Action” 1**

Base	Verb form	Meaning	Noun	Meaning
<i>Tuyu</i>	<i>t-um-uyu</i>	to run	<i>t-a-tuyu</i>	the way of running
<i>giridi?</i>	<i>g-um-iridi?</i>	to pity	<i>g-a-giridi?</i>	the way of sympathizing
<i>seŋko?</i>	<i>s-um-eŋko?</i>	to sail	<i>s-a-seŋko?</i>	the way of sailing
<i>roaŋ</i>	<i>r-um-oaŋ</i>	to get out	<i>r-a-roaŋ</i>	the way of getting out

The second group of verbs takes the prefix *ma-/na-* in Actor Voice. *Ma-* appears in non-past tense and *na-* appears in past tense. These verbs are predominantly stative verbs that are used only in Actor Voice, but dynamic double-voiced verbs are also part of the group. These verbs take the prefix *ka-* to form nouns indicating the manner of action, as shown in Table 5.

**Table 5: Nominalization: Reduplicated verb bases expressing “Manner of Action” 2**

Base	Verb form	Meaning	Noun	Meaning
<i>bata?</i>	<i>ma-bata?</i>	to lose	<i>ka-b-a-bata?</i>	the way of losing
<i>suan</i>	<i>ma-suan</i>	to grow (for plants)	<i>ka-s-a-suan</i>	the way of growing
<i>upi?</i>	<i>ma-upi?</i>	to get angry	<i>ka-a-upi?</i>	the way of getting angry

Dynamic verbs are the third group; and they take the prefix *maN-/naN-* in Actor Voice. They are predominantly double-voiced, although there are a few triple-voiced verbs (a combination of Actor Voice, Goal Voice, or Conveyance Voice with CONVEYED THEME<sup>11</sup> or INSTRUMENT as subject). If the prefix *paN-* is attached to the reduplicated form, it creates a manner-of-action noun, as shown in Table 6. /N/ in the prefix *paN-* is realized as nasalization of the first consonant of the base (as in the case of *pa-m-a-muahi* and *pana-nan̩koi* below) or insertion of a nasal (as in the case of *pa-ŋ-a-ŋompu* and *pa-m-a-mbere* below).

**Table 6: Nominalization: Reduplicated verb bases expressing “Manner of Action” 3**

Base	Verb form	Meaning	Noun	Meaning
<i>puahi</i>	<i>ma-muahi</i>	to dry	<i>pa-m-a-muahi</i>	the way of drying
<i>san̩koi</i>	<i>ma-nan̩koi</i>	to cultivate	<i>pa-n-a-nan̩koi</i>	the way of cultivating
<i>ompu</i>	<i>maŋ-ompu</i>	to pray	<i>pa-ŋ-a-ŋompu</i>	the way of praying
<i>bere</i>	<i>mam-bere</i>	to work	<i>pa-m-a-mbere</i>	the way of working

Below are sample sentences with “manner of action” nouns.

- (20) *k-a-kaha? ni-kim ma-rean̩ tumani*  
 RED-cry NI-Kim MA-intense very  
 “The way Kim cries is very intense. (Kim usually cries in a violent manner)”

- (21) *ka-t-a-toumata nu-ana? ene na-tahan̩ tumani*  
 KA-RED-be.born NU-child that NA-long very  
 “That child took a very long time to be born. (*Lit.* That child’s way of getting born was very lengthy)”

<sup>11</sup> The term CONVEYED THEME is a semantic role that denotes an entity moved by the ACTOR.

- (22) *pa-ŋ-a-ŋuri?*    *ni-hopi*    *si-sia?*    *ma-ka-s-a-soo?*    *ka-dijih-an*  
 PAN-RED-talk    NI-Hopi    SI-1sg    MA-KA-RED-dislike    KA-hear-AN  
 “The way Hopi talks to me makes us sick.”

#### 4.4.3. Noun formation expressing “location”

The third type of nouns derived from verb bases express “location.” They are formed with Type A reduplication and the suffix *-AN*. In addition, verbs that take the prefix *ma-/na-* in Actor Voice need the prefix *pa-*, and those that take the prefix *maN-/naN-* need the prefix *paN-*. In contrast, verbs that take an infix do not need any other affix, as shown in Table 7. Nouns are sometimes not regarded as the “location” but the entity that is the GOAL of the verb (as in *k-a-kan-en*).

**Table 7**

Base	Verb form	Meaning	Noun	Meaning
<i>dapo</i>	<i>d-um-apo</i>	to perch	<i>d-a-dapo-n</i>	perch
<i>su?</i>	<i>s-um-u?</i>	to enter	<i>s-a-su?-an</i>	entrance
<i>kan</i>	<i>k-um-an</i>	to eat	<i>k-a-kan-en</i>	food
<i>baru?</i>	<i>ma-baru?</i>	to sell	<i>pa-ba-baru?-an</i>	shop
<i>tiki</i>	<i>ma-tiki</i>	to sleep	<i>pa-t-a-tiki-an</i>	bed, bedroom
<i>poto?</i>	<i>ma-moto?</i>	to cross	<i>pa-m-a-moto?-an</i>	shortcut
<i>baehe?</i>	<i>ma-maehe?</i>	to pay	<i>pa-m-a-maeh-an</i> <sup>12</sup>	check out counter
<i>bere</i>	<i>mam-bere</i>	to work	<i>pa-m-a-mbere-nan</i> <sup>13</sup>	office, working place

Below are sentences with the noun formation expressing location.

- (23) *side*    *ma-ruan*    *h-a-hompon-an*    *su-pasaha?*  
 I.3pl    MA-sell    RED-sit-AN    SU-market  
 “They sell chairs in the market.”
- (24) *i-angga*    *r-um-ampañ*    *su*    *pa-m-a-moto?-an*  
 I-Angga    UM-walk    SU    paN-RED-shortcut-AN  
 “Angga takes the shortcut.”
- (25) *pa-t-a-tiki-an*    *ni-steŋi*    *bagai*  
 PA-RED-sleep-AN    NI-Stevy    big  
 “Stevy’s bedroom is big.”

<sup>12</sup> The base-final verb /e/ is deleted in this case. The deletion of a base-final vowel together with the glottal stop that follows, occurs with some verb bases.

<sup>13</sup> This is an irregular case in which the suffix *-AN* is realized as *-nan*. This irregularity is only found in this case.

#### 4.5. Adjectivization: Derivation from verb bases

##### 4.5.1. Derived adjectives from verb bases

When a verb base is partially reduplicated, taking the Type A form along with the prefixes *ma-* and *ka-*, it shows the characteristics of a certain entity to provoke the state described by the verb base. Examples are shown in Table 8.

**Table 8: Reduplicated adjective forms derived from verb bases**

Base	Verb form	Meaning	Adjective	Meaning
<i>sibi?</i>	<i>ma-sibi?</i>	to like	<i>ma-ka-s-a-sibi?</i>	lovable
<i>regei</i>	<i>r-um-egei</i>	to laugh	<i>ma-ka-r-a-regei</i>	laughable
<i>giridi?</i>	<i>g-um-iridi?</i>	to feel pity	<i>ma-ka-g-a-giridi?</i>	pitiful
<i>upi?</i>	<i>ma-upi?</i>	to be angry	<i>ma-ka-a-upi?</i>	make angry
<i>dadun</i>	<i>ma-dadun</i>	to be sick	<i>ma-ka-d-a-dadun</i>	able to make sick
<i>rono?</i>	<i>ma-rono?</i>	to fatten	<i>ma-ka-r-a-rono?</i>	be able to fatten

Below are examples using partially reduplicated adjectives of this type.

- (26) *i-anga ma-ka-s-a-sibi?*  
 I-Angga MA-KA-RED-like  
 “Angga is lovable.”

- (27) *mahege ma-ka-r-a-ronkon busa?*  
 hot.season MA-KA-RED-ripe banana  
 “The hot season makes bananas ripe.”

##### 4.5.2. Derived adjectives expressing occupational or habitual attributes

Verb bases that take the partially reduplicated Type A form can express a person’s occupational or habitual attributes. Examples are shown in the following sentences.

- (28) *i-heis ma-η-a-ηopasa?*  
 I-Heis MAN-RED-fish  
 “Heis is a fisherman (*Lit.* Heis constantly fishes)”

- (29) *i-deki bo i-tuadi?=ne ma-b-a-baru?*  
 I-Deki and I-younger.sibling=NI.3sg MA-RED-sell  
 “Deki and his younger brother/sister will sell something (Deki and his younger brother/sister are vendors).”



#### 4.6. Partial reduplication used for verbs

A Bantik verb takes a partially reduplicated form to indicate the plurality of the entities that the subject denotes, or to indicate the iterative aspect. The former takes Type A reduplication, while the latter takes Type B.

##### 4.6.1. Verb forms for plural subjects

The Type A form is also used to indicate occupational/habitual attributes of a person, as mentioned in Section 4.3.3. In addition, this form can indicate that the entities denoted by the subject noun are plural. The two functions are distinct in that the former cannot take past tense (therefore, it is categorized as an adjective) and has only the Active Voice form, but the latter can take both non-past and past tenses, as well as Active Voice and Goal Voice.

The examples below show the difference between the two functions. The meaning of the base *hompon* “to sit” cannot be related to an occupational or habitual attribute. Hence, the reduplicated form *h-um-a-hompon* must be interpreted as the form indicating plurality of the subject. Therefore, example 30a is not accepted, while example 30b, with a plural subject, is accepted. If the occupational attribute is applicable, as in example 31, both meanings are allowed. A singular subject requires the adjective form, as in example 31a. When a plural subject is present, as in example 31b, the reduplicated form is interpreted as a verb for plural subjects.

- (30)a. \**isie*      *h-um-a-hompon*  
                  I.sg      RED-UM-/a/-sit  
       b. *side*      *h-um-a-hompon*  
                  I.3pl      RED-UM-/a/-sit  
                  “They are sitting.”

- (31)a. *tete?*              *ni-heis*      *ma-η-a-opasa?*      *tou*      *isie*      *na-iran=te*  
       grandfather      NI-Heis      MAN-RED-/a/-fish      but      I.3sg      NA-die=COMP  
       “Heis’s grandfather was a fisherman, but he is dead.”  
       b. *side*      *ma-η-a-opasa?*      *tou*      *rou-i*      *gare=te*      *su-barei*      *n-side*  
       I.3pl      MAN-RED-/a/-fish      but      today      only=COMP      SU-house      NI-3pl  
       “They (usually) fish, but they just stayed home today.”

However, when the form takes the prefix indicating past tense, it always functions as “a verb” with a plural subject, as in examples 32a and 33. The singular subject is never allowed, as shown in example 32b.

- (32)a. *side na-a-oyou dan e?e*  
 I.3pl NA-RED-swim upward that  
 “They were swimming over there.” (not “\*They usually swam over there.”)
- b. *\*isie na-a-oyou dan e?e*  
 I.3sg NA-RED-swim upward that  
 Intended meaning: “S/he was a swimmer.”
- (33) *i-pasko bo i-stenli na-n-a-nekoso? manu? =ku*  
 I-Vasco BO I-Stenly NA-RED-steal chicken=NI.1sg  
 “Vasco and Stenly stole my chicken./ \*Vasco and Stenly always steal my chicken.”

This form can be used with Undergoer Voice as well. Below is an example of Goal Voice in a reduplicated form.

- (34) *manu? =ku t-a-tekos-an nu-toumata*  
 chicken=NI.1sg RED-steal-AN NU-people  
 “My chickens are stolen by people.”

#### 4.6.2. Iterative aspect

The iterative aspect is formed when Type B reduplication is applied to verb bases. It indicates that the action denoted by the verb is repeated. This iterative aspect can take each voice form and both non-past and past tense forms. Verbs with derivational affixes can also undergo this reduplication to express the iterative aspect. Examples are given in Table 9. AV in Table 9 is an abbreviation of Active Voice, and GV is that of Goal Voice.

**Table 9: Iterative aspect: Reduplicated verb forms**

Base	Verb	Meaning	Reduplicated Form
<i>Homponj</i>	<i>h-um-omponj</i> (AV)	to sit	<i>h-um-ompo-homponj</i>
<i>bahiga</i>	<i>ma-bahiga</i> (AV)	to speak	<i>ma-bahi-bahiga</i>
<i>Buno</i>	<i>ma-muno</i> (AV)	to kill	<i>ma-muno-muno</i>
<i>Buno</i>	<i>buno-n</i> (GV)	to kill (GV)	<i>buno-buno-n</i>
<i>serei</i>	<i>ma-paki-serei</i> (AV)	to show	<i>ma-paki-paki-serei</i>
<i>serei</i>	<i>paki-serei-an</i> (GV)	to show	<i>paki-paki-serei-an</i>

This iterative aspect can be used for singular subject nouns, as shown in the examples below. As shown in examples 36 and 37, the iterative form is normally used in non-past tense (the prefix *ma-*, the non-past Actor Voice prefix is used), although it is clear from the linguistic context that the actions were performed in the past.

- (35) *i-terok h-um-ompo-hompon*  
 I-Terok UM-RED-sit  
 “Terok usually (just) sits (and does not work).”
- (36) *i-ama?=ne ma-noso-noso? tou ie aya=te*  
 I-father=NI.3sg MA-RED-smoke but this not=COMP  
 “His/Her father used to smoke, but not any more.”
- (37) *i-santi ma-oyo-oyou su-ake bagai ie ada kokonio?=ken*  
 I-Santy MA-RED-swim SU-river this when small=KEN  
 “Santy used to swim in this river when he was young.”

Sometimes, the iterative aspect requires past tense. When the action has occurred in the past for a limited number of times, the past tense is required, as shown in example 38. Because the action of climbing took place only twice in the past, the iterative verb should be in the past tense.

- (38)a. *\*i-terok ma-ηabi-ηabi? baŋo ene ka-dua kabaini*  
 I-Terok MAN-RED-climb coconut that KA-two just.now  
 Intended meaning: “Terok climbed up that coconut tree twice just now.”
- b. *i-terok na-ηabi-ηabi? baŋo ene ka-dua kabaini*  
 I-Terok NAN-RED-climb coconut that KA-two just.now  
 “Terok climbed up that coconut tree twice just now.”

The past tense iterative aspect is required when the duration of the action is overtly limited in the context.

- (39)a. *\*i-yopi mam-bere-mbere su-bituŋ su-huaŋ nu-rima taon*  
 I-Yopi MAN-RED-work SU-Bitung SU-inside NU-five year  
 Intended meaning: “Yopi worked in Bitung for five years.”
- b. *i-yopi nam-bere-mbere su-bituŋ su-huaŋ nu-rima taon*  
 I-Yopi NAN-RED-work SU-Bitung SU-inside NU-five year  
 “Yopi worked in Bitung for five years.”

When the object of an action is restricted, the iterative aspect in past tense is preferred to that in non-past tense. In example 40, where the object of “cooking” is not limited, the preferred usage of the iterative verb is in non-past tense. On the other hand, example 41

shows a situation where the past tense is strongly preferred for the iterative verb with a very specific object.

- (40)a. *ia?*    *ma-hiŋa-hiŋa*    *pona*    *tou*    *ie*    *aya=te*  
 I.1sg    MA-RED-cook    before    but    now    no=COMP  
 “I used to cook, but not anymore.”

- b. ??*ia?*    *na-hiŋa-hiŋa*    *pona*    *tou*    *ie*    *aya=te*  
 I-1sg    NA-RED-cook    before    but    now    no=COMP  
 Intended meaning: “I used to cook, but not anymore.”

- (41)a. ??*ia?*    *ma-hiŋa-hiŋa*    *ure?*    *pona*    *tou*    *ie*    *aya=te*  
 I.1sg    MA-RED-cook    snake    before    but    now    no=COMP  
 Intended meaning: “I used to cook snake, but not any more.”

- b. *ia?*    *na-hiŋa-hiŋa*    *ure?*    *pona*    *tou*    *ie*    *aya=te*  
 I.1sg    NA-RED-cook    snake    before    but    now    no=COMP  
 “I used to cook snakes, but not anymore.”

To summarize, the iterative aspect is used predominantly in non-past tense, even if the event occurred in the past. Past tense is exclusively required in the following cases. When the number of times of the repeated action is overtly limited by the linguistic or non-linguistic context, past tense is required and, non-past tense is not accepted. When the habitual action took place within a limited duration of time, past tense is required and non-past tense is usually not allowed. If the object of the repeated action is specific and limited, then past tense is usually required.

## 5. Summary

We have explored three reduplication patterns in the Bantik language. First, full reduplication is found only in nouns but not in adjective and verb bases. Full reduplication has only one function, i.e., to denote the plurality of the entities denoted by the noun.

Second, productive reduplications in the Bantik language are partial reduplications. They are referred to as “C1 + /a/+base” (where the first consonant of the base is reduplicated, followed by the vowel /a/ and the base) and “σ1 + C2V2 + base” (where the first syllable and the onset and nucleus of the second syllable are repeated, followed by the base).

Third, both forms are widely found in adjective and verb derivations. The former, which we have referred to as Type A, shows the plurality of the modified noun or the subject of a verb, or functions as an inflectional or derivational device. Comparative

adjectives are formed with this type of reduplication. Adjectives that show occupational or habitual attributes are also formed with this type, as well as nominalized verb bases. The latter form, which we have referred to as Type B, mainly functions as an inflectional device, indicating excessiveness (for adjective bases) and the iterative aspect (for verb bases).

This study has shown the rich reduplicational morphology of the Bantik language and the significant role it plays in word formation and inflection.

### Abbreviations

1sg	first person singular
1pl.INC	first person plural inclusive
1pl.EXC	first person plural exclusive
2sg	second person singular
3sg	third person singular
3pl	third person plural
AV	Actor Voice
COMP	completive aspect
-AN	voice marker in Goal Voice
I-	noun marker denoting a singular human subject
-IM-	past voice marker in Actor Voice
GV	Goal Voice
MA-	non-past voice marker in Actor Voice
NA-	past voice marker in Actor Voice
MAN-	non-past voice marker in Actor Voice
NAN-	past voice marker in Actor Voice
NI-	noun marker denoting a singular human POSSESSOR or ACTOR in Undergoer Voice
NI-	past tense marker in Undergoer Voice
NU-	noun marker denoting plural human or non-human POSSESSOR, or ACTOR in Undergoer Voice
RED-	reduplicated form
SI-	noun marker denoting a singular human GOAL
SU-	noun marker denoting plural human or non-human GOAL
-UM-	non-past voice marker in Actor Voice

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